This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An interface device for use with ~~a high frequency~~ an ultrasound imaging system having a scan head with at least one transducer, the interface device being removably attachable to the scan head, the interface device comprising:

   a reservoir with a proximal end and a distal end, said proximal end being open and shaped to allow the transducer to ~~transverse across an intended scan path~~ be inserted within said reservoir, wherein said proximal end of said reservoir is configured to maintain a fluid tight seal between said reservoir and the scan head, and wherein said distal end ~~extending~~ of said reservoir is configured to extend past a distal end of the transducer, ~~and including~~

   a scan window located proximate said distal end of said reservoir through which ultrasound energy is transmitted and received, wherein said scan window is formed of a solid, non-flowable hydrogel, ~~wherein said reservoir maintains a fluid tight seal around the transducer,~~

   a fluid tight seal between said scan window and said distal end of said reservoir,

   and a fluid acoustic coupling medium located within said reservoir and filling a space between said transducer and said scan window.

2. (Original) The interface device of Claim 1, wherein the interface device is sterile.

3. (Original) The interface device of Claim 1, wherein said scan window is formed of a material with less than 1dB/mm signal loss of transmitted and received high frequency ultrasound.

4. (Currently amended) The interface device of Claim 1, wherein the scan window comprises a ~~non-flowable~~ cross-linked hydrogel.

5. (Currently amended) The interface device of Claim 1, wherein the scan window comprises a ~~non-flowable~~ cross-linked hydrogel and a ~~porous~~ mesh support structure.

6. (Currently amended) The interface device of Claim 4, wherein ~~the~~ said cross-linked hydrogel comprises a cross-linked polymer with water content greater than or equal to 50% by weight.

7. (Original) The interface device of Claim 4, wherein ~~the~~ said cross-linked hydrogel comprises polyethylene oxide.

8. (Original) The interface device of Claim 4, wherein ~~the~~ said cross-linked hydrogel is formed from polyisocyanate terminated poly(alkylene ether) polyols.

9. (Currently amended) The interface device of Claim 1, ~~wherein the length of the device past~~ further comprising means for adjusting a distance between said scan window and the transducer ~~is adjustable~~ to allow adjustment of a ~~the~~ position of said scan window with respect to a focus of the transducer ~~focus~~.

10. (Currently amended) The interface device of Claim ~~1~~9, wherein the distance between said scan window and the transducer is adjustable to position the transducer focus ~~is in the range of~~ approximately 2 to 6 mm ~~past the~~ distal to said scan window ~~the edge of the device~~.

11. (Currently amended) The interface device of Claim 1, wherein a ~~the~~ distal ~~end~~ surface of ~~the device is curved~~ said scan window has a concave curve to approximate a curvature ~~the radius~~ of an ~~the~~ eye.

12. (Currently amended) The interface device of Claim 1, wherein the reservoir comprises ~~one or more~~ a plurality of separate pieces between which ~~is disposed the hydrogel~~ said scan window is mechanically secured.

13. (Currently amended) The interface device of Claim 1, wherein the device incorporates delivery of fluid acoustic coupling material to a distal surface of said scan window.

14. (Currently amended) The interface device of Claim 1, wherein the interface device is configured to be removably attachable to the scan head of a high frequency ultrasound imaging system operable at a ~~the ultrasound~~ frequency ~~is~~ in ~~the~~ a range of 50 to 100 MHz.

15. (Original) The interface device of Claim 1, wherein the device incorporates access for surgical instruments.

16. (Original) The interface device of Claim 1, wherein the device incorporates a surgical instrument.

17. (Original) The interface device of Claim 1, wherein the device incorporates a surgical instrument that allows use of the instrument in positional relationship to the scanned image.

18. (Currently amended) The interface device of Claim 2, wherein the interface device is constructed of materials suitable to be sterilized by ionizing radiation.

19. (New) The interface device of Claim 1, wherein said proximal end of said reservoir is configured to allow the transducer to traverse across an intended scan path within said reservoir.